



wherein:

- Δ is selected from the group consisting of a biotinyl radical, a biocytinyl radical, a hydrogen atom, an acetyl ($\text{CH}_3\text{CO}-$) radical, an aliphatic chain which may contain one or two thiol, an aldehyde functional group and an amine functional group,

- Z represents a peptide sequence, selected from the group consisting of the sequences of the formulae:

Leu Leu Ser Ser (SEQ ID NO: 21)

Leu Leu Asn Ser- (SEQ ID NO: 22)

Arg Leu Asn Ser- (SEQ ID NO: 23)

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ser- (SEQ ID NO: 24)

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asp Leu- (SEQ ID NO: 25)

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ile- (SEQ ID NO: 26)

Leu Asn Gln Gln Arg Leu Leu Asn Ser- (SEQ ID NO: 27) and

Arg Ala Leu Glu Thr Leu Leu Asn Gln Gln Arg Leu Leu Asn Ser (SEQ ID NO: 28)

- Θ is selected from the group of peptide sequences:

- -Arg Gly Arg Leu Ile- (SEQ ID NO: 15)
- -Arg Gly Arg Leu Val- (SEQ ID NO: 16)
- -Arg Gly Lys Leu Ile- (SEQ ID NO: 17)
- -Arg Gly Lys Leu Val- (SEQ ID NO: 18)
- -Lys Gly Arg Leu Ile- (SEQ ID NO: 19)
- -Lys Gly Arg Leu Val- (SEQ ID NO: 20)

-Ω attached to the -CO- group of serine, is selected from the group consisting of:

- a hydroxyl group

-a peptide sequence Val - Ψ; and

one the sequence of formula

- Val Arg Trp Asn Glu Thr-Ψ,

- Val Gln Trp Asn Glu Thr-Ψ, and

- Val Gln Trp Asn Ser Thr-Ψ,

wherein Ψ, attached to the -CO- residue of Val or Thr is selected from the group consisting of a OH group, a NH₂ group and al alkoxy radical comprising from 1 to 6 carbon atoms.

45. Synthetic peptides of formula (I) according to claim 44 wherein Δ represents an aliphatic chain, said aliphatic chain being selected from the group consisting of an alkyl chain of 1 to 6 carbon

atoms, an alkenyl chain of 2 to 6 carbon atoms, and an aminoalkylcarbonyl chain of 2 to 6 carbon atoms.

46. Synthetic peptides of formula (I) according to claim 44 including one of the following sequences:

(LLSL)WGCRGLVGYTSVQWNET-

PFL; doesn't start SRA CAA

or

-Leu Leu Ser Leu Trp Gly Cys Arg Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn

1 5 10 15 20

Glu Thr- (SEQ ID NO: 2)

22

-LLSSWGCKGRLVGYTSVQWNET-

or

-Leu Leu Ser Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn

1 5 10 15 20

Glu Thr- (SEQ ID NO: 3)

22

-LLSS[~~WGCKGRLVCYT~~SVQWNST-

or

-Leu Leu Ser Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn

1 5 10 15 20

Ser Thr- (SEQ ID NO: 4)

22

-LLQS[~~WGCKGRLVCYT~~SVQWNST-

FPL

or

-Leu Leu Gln Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn

1 5 10 15 20

Ser Thr- (SEQ ID NO: 5)

22

-LLSS[~~WGCRGRLVCYT~~SVQWNET-

or

-Leu Leu Ser Ser Trp Gly Cys Arg Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn

1 5 10 15 20

Glu Thr- (SEQ ID NO: 8)

22

~~-LLSSWGCKGRLVCYTS-~~

or

-Leu Leu Ser Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser- (SEQ ID NO: 9)

1 5 10 15

-LLNSWGCKGRLVCYTS-

or

-Leu Leu Asn Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser- (SEQ ID NO: 10)

1 5 10 15

-ALETLLQNQQLLSWGCRGRLVCYTSVRWNET-

or

-Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ser Trp Gly Cys Arg Gly

1 5 10 15

Arg Leu Val Cys Tyr Thr Ser Val Arg Trp Asn Glu Thr- (SEQ ID NO: 11)

20 25 30

-ALETLLQNQQLLNIWGCRGRLVCYTSVRWNET-

or

-Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ile Trp Gly Cys Arg Gly

1 5 10 15

Arg Leu Val Cys Tyr Thr Ser Val Arg Trp Asn Glu Thr- (SEQ ID NO: 12)

20 25 30

-ALETLLQNQQLLDLWGCRGRLVCYTSSVRWNET-

or

-Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asp Leu Trp Gly Cys Arg Gly

1 5 10 15

Arg Leu Val Cys Tyr Thr Ser Val Arg Trp Asn Glu Thr- (SEQ ID NO: 13)

20 25 30

-LNQQRLLNSWGCKGRLVCYTSSV-

or

-Leu Asn Gln Gln Arg Leu Leu Asn Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr

1 5 10 15

Thr Ser Val- (SEQ ID NO: 14)

20

-RALETLLNQQRLLNSWGCKGRLVCYTSSV-

or

- Arg Ala Leu Glu Thr Leu Leu Asn Gln Gln Arg Leu Leu Asn Ser Trp Gly Cys Lys

1 5 10 15

Gly Arg Leu Val Cys Tyr Thr Ser Val- (SEQ ID NO: 15)

20 25

-RLNSWGCKGRLVCYTSV- ?

or

- Arg Leu Asn Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val- (SEQ ID NO: 16)

1 5 10 15

Eqn 47. Composition containing at least one synthetic peptide of formula (I) according to claim 44.

F 48. Composition according to claim 47 containing, as the at least one synthetic peptide of formula (I), SEQ ID NO: 3 and SEQ ID NO: 1.

49. Composition containing at least one synthetic peptide of formula (I) according to claim 44 and at least one group O HIV-1 recombinant peptide.

50. Composition containing at least one synthetic peptide of formula (I) according to claim 44, and at least one HIV-1 and/or HIV-2 recombinant or synthetic peptide.

51. Immunoassay method for detecting a group O HIV-1 infection comprising the steps of:

- a) obtaining a sample from a patient likely to contain anti-group O HIV-1 antibodies;
- b) contacting at least one synthetic peptide of formula (I) according to claim 44, detectably labelled, with said sample;
- c) detecting the presence or absence of a complex between said peptides and said antibodies;
- d) optionally assaying the amount of said antibodies in the sample; wherein the presence of a complex between said peptides and said antibodies is indicative of a group O HIV-1 infection.

F/ 52. Immunoassay method for detecting a group O HIV-1 infection comprising the steps of:

- a) obtaining a sample from a patient likely to contain anti-group O HIV-1 antibodies;
- b) contacting a composition according to claim 47, containing at least one synthetic peptide of formula (I), detectably labelled, with said sample;
- c) detecting the presence or absence of a complex between said peptides and said antibodies;

and

- d) optionally assaying the amount of said antibodies in the sample;

wherein the presence of a complex between said peptides and said antibodies is indicative of a group O HIV-1 infection.